

NCMC-7: Adhesion & Mechanical Properties II May 2nd & 3rd, 2005 ◊ Bldg. 101 / Employee Lounge

Monday, May 2nd, 2005 - Morning

8:00 am Registration

Continental Breakfast

8:30 am Welcome and Introduction

Michael Fasolka, Director, NIST Combinatorial Methods Center

Advances in C&HT Mechanical Properties

8:45 am Keynote Address:

Oden Warren, Hysitron, Inc.

Nanoindentation screening of substrate-support libraries and polymer contact

mechanics

9:30 am Instrumented indentation of polymeric coatings and nanocomposites: great

potential for combinatorial and high-throughput experimental design

Peter Votruba-Drzal, BFRL NIST

9:50 am Structure-property characterization of gradient photopolymerizable dental

materials

Sheng Lin-Gibson, MSEL NIST

10:10 am Refreshment Break and Informal Discussions

10:30 am Measuring elastic properties on the nanoscale with SPM techniques

Donna Hurley, MSEL NIST (Boulder)

11:15 am Gradient chemical micropatterns: a reference substrate for surface

nanometrology

Duangrut Julthongpiput, MSEL NIST

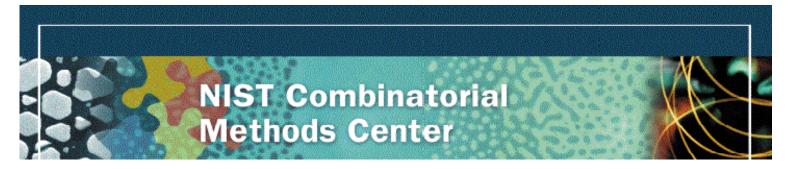
11:35 am Recent developments in our buckling-based metrology for thin film modulus

Shu Guo, MSEL NIST

11:55 am Measuring the elastic modulus of soft materials via reverse buckling mechanics

Elizabeth Wilder. MSEL NIST

12:15 pm Lunch (NIST cafeteria, Bldg. 101)



Monday, May 2nd, 2005 – Afternoon

Advances in C&HT Adhesion Platforms

1:30 pm	Keynote Address: Temperature and rate effects on adhesion and the potential for combinatorial testing David Yarusso, 3M Company
2:15 pm	Combinatorial peel of pressure sensitive adhesives Patricia McGuiggan and Jim Filliben, MSEL NIST
2:35 pm	Peel of transdermal patches Stan Brown, FDA
2:55 pm	Refreshment Break and Informal Discussions
3:15 pm	Keynote Address: Hot melt adhesives Charles Paul, National Starch & Chemical Company
4:00 pm	Combinatorial approaches for characterizing interfacial adhesion Martin Chiang, MSEL NIST
4:20 pm	Combinatorial tools for depositing inorganic thin films Peter Schenck and Martin Green, MSEL NIST
4:40 pm	Surfaces formed during glass fracture JP. Guin and S.M. Wiederhorn, MSEL NIST
5:00 pm	Adjourn
6:30 pm	Dinner (RSVP Required) TBD Directions will be provided in the NCMC-7 Program Book

Tuesday, May 3rd, 2005 - Morning

8:30 am Reconvene

9:00 am

11:30 am

12:00 pm

Continental Breakfast

Introduction and NCMC Services

NCMC Update Symposium

	Michael Fasolka, Director, NIST Combinatorial Methods Center
9:10 am	Controlled radical polymerization on a chip Tao Wu , MSEL NIST
9:30 am	Development of a microfluidic rheometer Jai Pathak, MSEL NIST
9:50 am	Refreshment Break and Informal Discussions
10:10 am	Combinatorial measurements of monomer conversion and polymer shrinkage on a microfluidic chip Zuzanna Cygan, MSEL NIST
10:30 am	Preparation of colloidal assemblies by using an integrated microfluidic device. Hua Hu , MSEL NIST
10:50 am	High-throughput synthesis and parallel dissolution evaluation of polyanhydrides for controlled drug delivery applications Brandon Vogel, MSEL NIST
11:10 am	Combinatorial approach for measuring interfacial shear strength (IFSS) and failure initiation in composites Jae Hyun Kim, MSEL NIST

Michael Fasolka, Patricia McGuiggan, Chris Stafford

NCMC Tours, Demonstrations and Tutorials

Closing thoughts & discussion

Lunch (NIST cafeteria, Bldg. 101)

1:30 pm	Convene in NCMC Labs – Building 224, Rm. B204
	NCMC Open House and Discussions

3:00 pm Adjourn – See you at NCMC-8!